

full of Snow or Ice (taking care that the Ice be made of the purest water, because they put it into their wine ) over-spreading first the bottom very well with *Chaffe* ; by which I mean not any part of the straw, but what remains upon the winnowing of the Corn; and I think, they here use Barley-chaffe. This done, they further, as they put in the Ice, or the Snow, ( which latter they ram down, ) line it thick by the sides with such Chaffe, and afterwards cover it well with the same; and in half a years lying so, 'tis found not to want above an eight part of what it weighed, when first put in. When ever they take it out into the Aire, they wrap it in this Chaffe, and it keeps to admiration. The use of it in *England* would not be so much for cooling of drinks, as 'tis here generally used ; but for cooling of fruit, sweet-meats &c. *So far this Author.*

The other usual way both in *Italy* and other Countries, to conserve Snow and Ice with *Straw* or *Reed*, is set down so punctually by *Mr. Boyle* in his *Experimental History of Cold*, pag. 408. 409. that nothing is to be added. It seems *Pliny* could not pass by these *Conservatories*, and the cooling of drinks with Ice, without passing this severe, though elegant and witty, Animadversion upon them: *Hi Nives, illi glaciem potant, pœnâsque montium in voluptatem gulæ vertunt : Servatur aliorum æstibus, excogitatûrque ut alienis mensibus nix algeat*, lib. 19. cap. 4. But the *Epigrammatist* sports with it thus ;

*Non potare nivem, sed aquam potare rigentem*

*De nive, commenta est ingeniosa sitis.* *Martial*, 14. Ep. 117.

### *Directions for Sea-men, bound for far Voyages.*

It being the Design of the *R. Society*, for the better attaining the End of their Institution, to study *Nature* rather than *Books*, and from the Observations, made of the *Phænomena* and Effects she presents, to compose such a *History*

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ry of Her, 'as may hereafter serve to build a Solid and Useful Philosophy upon; They have from time to time given order to several of their Members to draw up both *Inquiries* of things Observable in forrain Countries, and *Directions* for the Particulars, they desire chiefly to be informed about. And considering with themselves, how much they may increase their *Philosophical* Stock by the advantage, which *England* enjoys of making Voyages into all parts of the World, they formerly appointed that Eminent Mathematician and Philosopher Master *Rooke*, one of their Fellowes, and *Geometry* Professor of *Gresham Colledge* (now deceased to the great detriment of the Common-wealth of Learning) to think upon and set down some *Directions* for *Sea-men* going into the *East & West-Indies*, the better to capacitate them for making such observations abroad, as may be pertinent and suitable for their purpose; of which the said *Sea-men* should be desired to keep an exact *Diary*, delivering at their return a fair Copy thereof to the Lord High Admiral of *England*, his Royal Highness the Duke of *York*, and another to *Trinity-house* to be perused by the *R. Society*. Which *Catalogue of Directions* having been drawn up accordingly by the said Mr. *Rook*, and by him presented to those, who appointed him to expedite such an one, it was thought not to be unseasonable at this time to make it publique, the more conveniently to furnish Navigators with Copies thereof. They are such, as follow;

1. To observe the Declination of the *Compass*, or its Variation from the *Meridian* of the place, frequently; marking withal, the *Latitude* and *Longitude* of the place, wherever such Observation is made, as exactly as may be, and setting down the *Method*, by which they made them.
2. To carry *Dipping Needles* with them, and observe the Inclination of the Needle in like manner.
3. To remark carefully the Ebbings and Flowings of the Sea, in as many places as they can, together with all the Ac-

dents, Ordinary and Extraordinary, of the Tides ; as, their precise time of Ebbing and Flowing in Rivers, at *Promontories* or *Capes* ; which way their Current runs, what Perpendicular distance there is between the highest Tide and lowest Ebb, during the Spring Tides and Neap-Tides ; what day of the *Moons* age, and what times of the year, the highest and lowest Tides fall out : And all other considerable Accidents, they can observe in the Tides, chiefly neer Ports, and about Islands, as in *St. Helena's* Island, and the three Rivers there, at the *Bermudas* &c.

4. To make Plotts and Draughts of prospect of Coasts, Promontories, Islands and Ports, marking the Bearings and Distances, as neer as they can.

5. To sound and marke the Depths of Coasts and Ports, and such other places nere the shoar, as they shall think fit.

6. To take notice of the Nature of the Ground at the bottom of the Sea, in all Soundings, whether it be Clay, Sand, Rock, &c.

7. To keep a Register of all changes of Wind and Weather at all houres, by night and by day, shewing the point the Wind blows from, whether strong or weak : The Rains, Hail, Snow and the like, the precise times of their beginnings and continuance, especially *Hurricanes* and *Spouts* ; but above all to take exact care to observe the *Trade-Wines*, about what degrees of *Latitude* and *Longitude* they first begin, *where* and *when* they cease, or change, or grow stronger or weaker, and how much ; as near and exact as may be.

8. To observe and record all Extraordinary *Meteors*, Lightnings, Thunders, *Ignes fatui*, Comets, &c. marking still the places and times of their appearing, continuance, &c.

9. To carry with them good Scales, and Glasse-Violls of a pint or so, with very narrow mouths, which are to be fill'd with Sea-water in different degrees of *Latitude*, as often as they

they please, and the weight of the Vial full of water taken exactly at every time, and recorded, marking withall the degree of *Latitude*, and the day of the Month : And that as well of water near the Top ; as at a greater Depth.

*Some Observations concerning Jupiter. Of the shadow of one of his Satellites seen, by a Telescope passing over the Body of Jupiter.*

I have received an Account from very good hands, That on the 26<sup>th</sup>. of *September* last, at half hour after seven of the Clock, was seen, both in *Holland* and in *France* (by curious Observers, with very good Telescopes) the shadow of one of the *Satellites* of *Jupiter*, passing over his Body. One of those small Stars moving about his Body (which are therefore called his *Satellites*) coming between the Sun and it, made a small Eclipse, appearing in the Face of *Jupiter* as a little round black Spot. The Particulars of those Observations, when they shall come to our Hands, we may (if need be) make them public : Which Observations, as they are in themselves very remarkable, and argue the Excellency of the Glasses by which they were discovered ; So are we, in part, beholding to *Monsieur Cassini* for them, who giving notice before-hand of such Appearances to be expected, gave occasion to those Curious Observers to look for them.

*Of a permanent Spot in Jupiter : by which is manifested the conversion of Jupiter about his own Axis.*

Besides that Transient Shadow last mentioned, there hath been observed, by *Mr. Hook* first (as is mentioned in *Numb. I.* of these *Transacts.*) and since by *M. Cassini*, a permanent Spot in the Disque of *Jupiter*; by the help whereof, they have been able to observe, not onely that *Jupiter* turns about upon his own Axis, but also the Time of such conversion ; which he estimates